

is the great slate belt which extends across from Virginia, through Person, Orange, Chatham, Randolph, Stanley, Union and adjoining counties. It has a maximum width of some forty miles; the rocks are everywhere folded or broken, and tilted; and are penetrated by numerous dikes and veins; many of the latter being impregnated with gold bearing ores. And in the western part of this slate belt, especially in Davidson and Cabarrus counties, these gold ores have associated with them ores of silver, lead, zinc and copper. The region is one of hills and valleys and rapid streams, along which have been developed numerous excellent water powers. Just west of this slate belt, lies a belt of granite and other kindred rocks; extending across the state; having a width varying from ten to twenty miles. These rocks are also penetrated by numerous veins which carry gold bearing ores; and in some cases, especially in Guilford county, these are also highly impregnated with copper ores, and in some places this granite belt, as well as the slate belt, contains valuable deposits of iron ore. Lying west of this granite belt and extending from it to the foot hills of the Blue Ridge, is a large area, the rocks of which are of gneisses and granites, with here and there more limited belts of slate. The rocks are very old, belonging probably to the Archaean age. They are often deeply decayed, forming fertile loam soils. In some places, valuable and extensive beds of granite are to be found. At intervals throughout the entire region the rocks are penetrated by quartz veins which contain in many places gold bearing ores; the more noted gold bearing areas of this region being those in eastern Catawba; about the South Mountains in Burke, McDowell and Rutherford counties, and in the Western part of Caldwell county. There are also in this region valuable deposits of iron; notably those in Stokes, Gaston, Macon and Catawba counties. This region is exceedingly hilly, being penetrated by the Brushy mountains, south of the Yadkin, and the South mountains, south of the Catawba river.

The geology of the mountain region is perhaps fully as complicated as that of the Piedmont Plateau. Over the larger part of the region are to be found the older crystalline rocks, greatly folded and turned on their edges; and they contain at intervals valuable deposits of iron ore: notably magnetic iron ores in the region about Cranberry in Mitchell county; in Ashe and Madison counties and in a number of places these rocks are also penetrated by veins carrying gold, silver and copper bearing ores. Along the line of the Blue Ridge and again along the line of the Great Smoky mountains are narrower belts of rocks, belonging to what has been designated the Ocoee period.